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ABSTRACT

The study sought to determine the effects of a summer bridge program on the academic, personal, and social development of underrepresented and low-income students during their first year at the University of California, Los Angeles. The 1988 cohort of students enrolled in the Freshman Summer Program/Transfer Summer Program (FSP/TSP) were tracked through their first two quarters, collecting both attitudinal and academic data. FSP/TSP is a 6-week program with a curricular component involving either an intensive mathematics course or English composition/general education course. Data from 265 students suggest that summer bridge programs can help facilitate students' transition and adjustment to university life and improve their academic performance and persistence rates. FSP/TSP has proven that a strong curricular component can help teach students how to participate and succeed in an academic environment. The programs can also help underrepresented and low-income students adjust and adapt to university life and help them become members of the campus community. Includes 34 references. (Author/JDD)

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The Benefits of Summer Bridge Programs for Underrepresented and Low-Income Students

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Abstract
The Benefits of Summer Bridge Programs for Underrepresented and Low-Income Students

University summer bridge programs or transitional programs for low-income and minority students are becoming an established part of the effort to recruit, retain, and graduate a population of students underrepresented in higher education. The purpose of this study was to determine the effects of a summer bridge program on the academic, personal, and social development of underrepresented and low-income students during their first year at the University of California, Los Angeles (UCLA). The 1988 cohort of FSP/TSP students were tracked through their first two quarters at UCLA, collecting both attitudinal and academic data.

The results of this study clearly suggest that summer bridge programs for underrepresented and low-income students can help facilitate their transition and adjustment to university or college life and improve their academic performance and persistence rates. FSP/TSP has proven that a strong curricular component can help teach students how to participate and succeed in an academic environment. In addition, these findings have also shown that summer bridge programs like FSP/TSP can help underrepresented and low-income students adjust and adapt to university life and can help them become a member of the campus community.

The Benefits of Summer Bridge Programs for Underrepresented and Low-Income Students

1.1 INTRODUCTION AND LITERATURE REVIEW

University summer bridge programs or transitional programs for low-income and minority students are becoming an established part of the effort to recruit, retain, and graduate a population of students underrepresented in higher education. Research and evaluation of these programs are less common, even though universities and colleges are spending enormous funds and human resources to ensure high participation and success.

General retention and attrition research has shown that several factors possibly contribute to the high attrition rates of underrepresented and low-income students. Research on the attrition and retention of students at four-year institutions, for the most part, have been based on Durkheim's (1961) theory of suicide (Spady, 1971; Tinto, 1975). Tinto (1975) argues that college is a social system with its own values and social structure. He contends that if dropout from the social system can manifest itself as suicide in the wider society because of insufficient integration into society, then dropout from school can occur when a student is insufficiently integrated into the academic environment.

Building on Tinto's work, Pascarella (Pascarella and Terenzini, 1979; Terenzini and Pascarella 1980; Pascarella and Chapman, 1983; Pascarella and Terenzini, 1983) found that the extent to which the assessment of differential levels of social

and academic integration and institutional and goal commitment contribute to the prediction of persistence/dropout behavior when the influence of pre-college characteristics are taken into account.

Although many researchers have agreed with the premise that attrition/retention models should be based on Durkheim's theory of suicide, there is one leading theorist who disagrees. In a 1979 paper presented to the American Educational Research Association, Bean stated that "The link between dropping out of school and committing suicide is suggested as the theoretical basis for (attrition/retention) models, but evidence is not provided indicating that dropping out of school is indeed analogous to committing suicide."[1]

The theoretical underpinnings of Bean's models of student attrition and retention are based on socialization and selection. Bean argues that academic factors (e.g., college grades) and social-psychological factors (e.g., personal commitment) have a positive influence on a students' decision to persist, while environmental factors (e.g., institutional fit) have a negative influence on a students' decision to persist. In summary, Bean's theory of persistence/withdrawal is based on socialization as a process of acquiring the appropriate norms, attitudes, self-images, values, and behaviors that lead to acceptance by a

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[1]Bean, J.P. (1979). Path analysis: The development of a suitable methodology for the study of student attrition. Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA, p. 3.

group. Students who learn these roles will succeed, and therefore be more likely to persist.

Building on the work done by general attrition/retention theorists, models have been developed to specifically explain underrepresented (minority) student attrition/retention in various types of four-year institutions (Mallinckrodt, 1987; Nettles, 1986; Oliver, 1985; Perry, 1981; Redon, 1981). One of the most highly researched models of minority student attrition/retention was developed at the University of Maryland. Tracey and Sedlacek developed a model to predict the performance of first-year minority college students because they found that traditional measures of success (e.g., first year grade point average [GPA] and admissions data such as Scholastic Aptitude Test [SAT] scores) were accurate predictors for White students, but not for Black students. Tracey and Sedlacek found that "less intellectual" variables or non-cognitive dimensions, as opposed to the more traditional factors, were more highly predictive of academic success for minority students.

Astin (1982), using the *Cooperative Institutional Research Program (CIRP),* collected data from students' first two years of undergraduate work in an attempt to identify those factors that affect minority educational progress. Astin found that minority students with the best chance of persistence had: (1) high entrance GPA and test scores; (2) well-developed study habits; (3) a high academic ability self-esteem; (4) come from a relatively affluent and well-educated family; (5) an integrated high

school experience; (6) lived on campus; and (7) not held an outside job. Thus, according to Astin, minority students with a strong academic background and are well-integrated into campus life have a better chance of succeeding at a four-year institution, than do other minority students.

In summary, research studies investigating attrition/retention of minority students at four-year institutions have indicated that student success is based partly on past academic preparation and achievement, partly on demographic variables, and partly on student-institution satisfaction and fit (Crosson, 1988; Guloyan, 1985; Keller et. al., 1982; Kissler, 1980; Nettles et al., 1986; Vaz, 1987). In light of these findings, how can an institution help underrepresented students succeed and persist at a four-year institution?

1.2 PURPOSE OF THE STUDY

The purpose of this study was to determine the effects of a summer bridge program on the academic, personal, and social development of underrepresented and low-income students during their first year at the University of California, Los Angeles (UCLA). Research covered in this paper is based on an on-going longitudinal evaluation, designed to determine the success and/or failure of UCLA's summer bridge program.

In 1988, the first comprehensive, external evaluation of the UCLA Academic Advancement Program's (AAP) Freshman Summer Program

and Transfer Summer Program (FSP/TSP) took place. The two-phase evaluation was designed not only to provide administrators with a clear understanding of the success and failures of the program, but also to provide other universities with a comprehensive model for conducting similar evaluations. Phase I of the evaluation, or the programmatic review, concentrated on the five components of the program that purportedly had the greatest impact on student success: academics, student and professional staff training, parental involvement, social and cultural awareness, and the counseling services. Phase II of the evaluation was a longitudinal study, designed to track the 1988 FSP/TSP students' academic progress from summer through winter quarter of the 1988-1989 academic year.

FSP/TSP is designed to increase the academic achievement, retention, and graduation of underrepresented and low-income students. The goals and objectives of the programs are:

(1) To facilitate entering students' transition from high school and community college to UCLA;

(2) To increase the potential for the persistence, retention, and graduation of Summer Program students by introducing the academic demands of university life, the social, political, and cultural context of university life, and university structure, resources, and services;

(3) To facilitate the development of critical thinking, academic skills, and personal and social responsibility;

(4) To introduce Academic Advancement Program retention services to eligible students, including counseling, learning skills and tutoring;

(5) To promote the appreciation of racial, cultural, and socioeconomic diversity at UCLA and foster the ability of Summer Program students to function in the university environments; and

(6) To build and reinforce the positive self image, inner confidence and self direction of Summer Program students.

FSP/TSP is a six-week program designed to bring students already accepted for admissions to UCLA onto campus prior to their first year at UCLA. Students are strongly encouraged, but not required, to live in the dormitories in order to get a sense of university life and to become fully acquainted with the campus and its resources. The curricular component of FSP/TSP included either a mathematics intensive or an English composition/general education intensive. Students could enroll in one of the two intensives. The mathematics intensive consisted of a mathematics course in the morning and a Professional Development Program (PDP) workshop, patterned after the University of California, Berkeley program, in the afternoon. For the English composition/general education intensive, students enrolled in an English class according to proficiency, and in a general education course according to proficiency and interest. Six hundred and forty-five students attended FSP/TSP in the summer of 1988 (570 FSP students and 75 TSP students).

1.3 STUDY DESIGN

To obtain an understanding of how the 1988 FSP/TSP students adjusted to the academic, social, and cultural demands of university life, this cohort of students were tracked through

their first two quarters at UCLA, collecting both attitudinal and academic data. Attitudinal data was collected using the *FSP/TSP Final Questionnaire* (Ackermann, 1988). The questionnaire was designed to give students an opportunity to assess the extent to which the goals and objectives of the program were met, in light of their experiences at UCLA. In addition, the questionnaire asked students to rate the quality and availability of various campus services and to indicate whether or not they utilized the services.

The *FSP/TSP Final Questionnaire* was designed as a close-ended, mail questionnaire. The questionnaire was constructed as a series of 5-point likert items. From these items, sub-scales were created and renamed to reflect their content more accurately. Only those scales that had a Internal Consistency Alpha Coefficient of .70 or above were considered for analysis.

The questionnaire was piloted between December, 1988 and January, 1989. The initial mailing to all 1988 FSP/TSP students occurred during the third-week of February, 1989, with the follow-up mailing occurring during the second week of March, 1989. Of the 645 questionnaires sent, 265 were returned indicating a response rate of 41% (41% for FSP students and 36% for TSP students). Chi-square tests of significance were computed to determine whether or not there were differences between the type of student who completed and returned the questionnaire and the type of student who did not. The results from the Chi-square tests indicated that no differences were

found between respondents and non-respondents in the areas of gender (p=.313) and ethnicity (p=.167).

Students' summer, fall, and winter grades, along with the number of units attempted and completed and declared major were obtained from UCLA's Student Record System.

1.4 FINDINGS

Demographics. Demographic information obtained about respondents revealed that 90% of the students were freshman and 10% were transfer students. Sixty five percent of the respondents were female and 35% were male. The ethnic breakdown was 40% Chicano, 25% Black, 19% Latino, 5% Filipino, 4% Asian, 4% White/Caucasian, with the remaining 3% identifying themselves as either American Indian or other. A majority of the students (90%) indicated that they had taken three courses during the fall quarter, 4% indicated that they had taken four courses, and the remaining 6% indicating that they had taken only two courses during the fall quarter of the 1988-1989 academic year.

During the fall quarter of the 1988-1989 academic year, 35% of the students reported working in paid positions on-campus and 22% reported working in paid positions off-campus. Forty-one percent commuted to campus and 71% stated that they spent time every week taking care of family responsibilities. Fifty-two percent participated in student clubs or activities and 54% reported participating in recreational sports or activities.

And, when asked about their major area of study, the largest

percentage of students, 46%, had yet to declare a major by the end of the winter quarter. Twenty-one percent of the students, however, declared a major within the division of Life Science, 15% within the division of Social Science, and 7% each declared a major within the divisions of Humanities or Physical Science. Four percent declared majors in the Schools of Engineering or Fine Arts.

Goals and Objectives of FSP/TSP. The first section of the questionnaire dealt specifically with the goals and objectives of FSP/TSP. Questions in this section were constructed as a series of 5-point likert items. From these items, two sub-scales were created and renamed to reflect their content more accurately -- an Academic Goals/Objectives Scale, referring to the extent to which the academic goals and objectives of FSP/TSP were accomplished; and a Non-Academic Goals/Objectives Scale, referring to the extent to which the non-academic goals and objectives of FSP/TSP were accomplished. The Internal Consistency Alphas for the two scales were .78, and are believed to be reasonable. That is to say, the scales created appear to be reliable and stable measures. Both scales ranged from one to five, with "1" representing a low rating, "3" representing a moderate or average rating, and "5" representing a high rating.

[Insert Figure 1]
[about here]

Figure 1 presents the results of the students' ratings on the Academic and Non-Academic Goals/Objectives Scales, by ethnicity. White students gave the fulfillment of the academic

goals/objectives the highest rating (3.8), with Black students giving it the lowest (3.5). While the fulfillment of the non-academic goals/objectives were given higher ratings compared to the academic goals/objectives, ratings were still in the "moderate" range. Again, White students rated the fulfillment of the non-academic goals/objectives, such as increasing their self-confidence and aiding in their social and cultural adjustment to UCLA the highest (4.2), while Black students rated it the lowest (3.8). For the total population of students (N=265), the mean rating for the fulfillment of the non-academic goals/objectives was higher than the mean rating for the fulfillment of the academic goals/objectives. In fact, students indicated that the academic goals/objectives, such as aiding their academic adjustment to UCLA and increasing their control over their academic future, were only "moderately" fulfilled.

[Insert Table 1]
[about here]

Table 1 presents the results from three other questions that address the fulfillment of academic goals/objectives. Over two-thirds of the students (68%) indicated that they were able to keep up in most of their classes. But, approximately one-quarter (24%) of these students indicated that their fall classes were more difficult than they expected them to be, and 69% of the students indicated that it was academically more difficult during fall quarter than it was during FSP/TSP.

Table 1 also presents the results from two questions which address other program goals/objectives. When asked if the

students considered themselves members of the UCLA community, 80% agreed with only 3% disagreeing. And, when asked if their goal was to graduate from UCLA, 95% agreed, with less than one percent disagreeing. Responses from these questions point to the fact that students thought that FSP/TSP facilitated their transition to university life in general, and to UCLA in specific. Students, in their written comments, corroborated these findings by stating that "FSP has been a very important part in aiding my success at UCLA. I have learned to compete at higher levels" and "It was a tough adjustment, but I really don't think I could have done it with out FSP & AAP. FSP & AAP really prepared me for it!!"

The *FSP/TSP Final Questionnaire* also asked students to indicate how FSP/TSP prepared them to participate effectively in a classroom and to assess their own abilities and attitudes. Questions in this section were constructed as a series of 3-point likert items from which sub-scales were created and then renamed to reflect their content. For the preparation section, two sub-scales were created -- a Classroom Participation Scale, referring to how prepared students are to function effectively in a classroom (e.g., take complete notes, ask questions, understand the content being covered); and an Abilities and Attitudes Scale, referring to how prepared students are to assess their own feelings and interact with others (e.g., assess their strengths and weaknesses, relate to others, manage their time). The Internal Consistency Alphas for the two scales ranged from .73 to

.81 and are believed to be very reliable and stable measures. Both scales ranged from one to three, with "1" indicating that the student considered him/herself poorly prepared, "2" indicating that the student considered him/herself adequately prepared, and "3" indicating that the student considered him/herself well prepared.

[Insert Figure 2]
[about here]

Figure 2 presents the results of students' ratings on the Classroom Participation and Abilities and Attitudes Scales, by ethnicity. On average, students indicated that FSP/TSP "adequately" prepared them to participate effectively in a classroom and to assess their abilities and interact with others. (For the total population [N=264], the mean rating on the Classroom Participation Scale was 2.2 and the mean rating on the Abilities and Attitudes Scale was 2.3.) White students, by far, gave both scales the highest ratings, indicating that they thought FSP/TSP "adequately-to-well" prepared them to participate effectively in a classroom and to assess their abilities and interact with others. The mean ratings given by Black, Chicano, and Latino students, on both scales, averaged 2.3.

Use of university services. The second major section of the questionnaire asked students to indicate how satisfied they were with various campus academic and support services. Students could rate the quality and availability of campus services using a likert scale that ranged from one to five, with a "1" meaning that they were very dissatisfied, a "3" meaning that they were

neither dissatisfied or satisfied, and a "5" meaning that they were very satisfied. For academic services, students tended to indicate that they were generally "satisfied" with both the availability and quality of the services -- Faculty members, Teaching Assistants, Tutorial Services, and Departmental Advisors. Students were also generally satisfied with campus support services such as Campus Psychological Services, the Libraries, and the Office of Residential Life. The support service with which students were the most dissatisfied was Financial Aid. Nineteen percent of the students, however, reported being dissatisfied with the availability of Financial Aid.

[Insert Table 2]
[about here]

Students also had the opportunity to rate AAP services. Table 2 presents Fall quarter utilization patterns for AAP Tutorial and Counseling services. Forty-two percent of the respondents indicated that they never used AAP Counseling services, while 21% never used AAP Tutorial services. Forty-nine percent of the respondents indicated that they utilized AAP Counseling services between one and five hours a week, and 9% indicated that they used AAP Counseling services as average of six or more hours a week. Forty-six percent of the students indicated that they utilized AAP Tutorial Services one to five hours a week, and 33% indicated that they utilized Tutorial services 6 or more hours a week. When asked if they were planning to utilize AAP services during the rest of the 1988-1989

academic year, 88% said yes, 3% said no, and 9% were unsure. Clearly, these students plan to utilize the services provided by AAP.

[Insert Table 3]
[about here]

When asked how satisfied they were with the quality of AAP Tutorial services, 77% indicated that they were satisfied, 15% indicated that they were neither satisfied or dissatisfied, and 8% indicated that they were dissatisfied with the AAP Tutorial Services (see Table 3). When asked if they were satisfied with the availability of AAP Tutorial Services, 80% indicated they were satisfied, 21% were neutral, and 7% were dissatisfied. From the students' written comments, dissatisfaction with tutorial services seemed to stem from the fact that group tutoring did not provide enough time to answer everyone's questions, individual tutors were difficult to obtain, and the tutorial study hall was often too noisy for students to concentrate. When satisfaction with AAP Tutorial services was broken down by ethnicity, Chicano and Latino students gave both the quality and availability of AAP Tutorial services very high ratings, indicating they were "satisfied to very satisfied" with the services. White students gave both quality and availability the lowest ratings.

Not only did students utilize AAP Counseling services less than AAP Tutorial services, they were also much less satisfied with the services provided. When asked about the quality of AAP Counseling services, only 64% indicated that they were satisfied,

20% indicated that they were neither satisfied or dissatisfied, and 16% indicated that they were dissatisfied with the quality of AAP Counseling services (see Table 3). A similar patter was found with respect to the availability of Counseling services. Here, 65% indicated that they were satisfied, 21% were neutral, and 14% indicated that they were dissatisfied with the availability of AAP Counseling services. When satisfaction with AAP Counseling services was broken down by ethnicity, White students were, by far, the most satisfied with both the quality and availability of the services. Latino, Chicano, Black, and Asian students all gave the quality and availability of AAP Counseling services average ratings. One possible explanation of the dissatisfaction with counseling services could be due to the fact that a large percentage of both the professional and peer counselors were relatively new to AAP.

[Insert Figure 3]
[about here]

Students' academic perform at UCLA after having attended FSP/TSP is another indication of how well FSP/TSP prepared students to face the academic challenges that UCLA has to offer. Figure 3 presents the mean grade point averages (GPA) for summer, fall, and winter quarters of the 1988-1989 academic year. The mean GPA achieved by students during FSP/TSP (summer '88) was 2.64; it fell slightly during the fall quarter to 2.30, and then increased slightly to 2.37 in winter quarter. The mean cumulative grade point average for summer, fall, and winter was 2.49, or approximately between a C+ and B- average.

[Insert Figure 4]
[about here]

Figure 4 presents student grade point averages, by ethnicity. For all three quarters (summer, fall, and winter), White students performed the highest, while Black student performed the lowest. And, for all three quarters, differences between the GPA's of all five ethnic groups were statistically significant at the $p<.01$ level. During FSP/TSP (summer '88), White and Asian students maintained a mean GPA of above a 3.0 (White students, 3.35; Asian students, 3.22), Latino students maintained a mean GPA of 2.84, Chicano students a mean GPA of 2.63, and Black students a mean GPA of 2.21. White, Asian, and Latino students showed a decrease in GPA from summer to fall, and then again from fall to winter. Black and Latino students, on the other hand, showed a decrease in GPA between summer and fall quarters, then showed an increase in GPA between fall and winter quarters. The cumulative grade point average of students, by ethnicity, reveal that White students had the highest GPA (3.19), followed by Asian students (2.87), Chicano students (2.50), Latino students (2.45), and then Black students (2.28).

[Insert Figure 5]
[about here]

Figure 5 presents student grade point averages, by gender. For all three quarters, male students performed higher than female students. While the difference between male and female students' mean GPA was statistically significant at the $p<.01$ level during FSP/TSP (Summer '88), differences between the GPA of

males and females decreased during the fall quarter, and then decreased again during the winter quarter.

The persistence rates of these students is also another indicator of the success of FSP/TSP. Ninety-seven percent of the FSP and 93% of the TSP continued into their third quarter at UCLA (spring quarter, 1988-1989 academic year), clearly indicating that FSP/TSP is successful at retaining its students. When the FSP/TSP persistence rates are compared to the persistence rates for the entire campus, the findings show that 90% of all underrepresented freshman students continued into their second year at UCLA and 83% of all underrepresented junior level students continued into their second year at UCLA.[2] Therefore, underrepresented students who participate in FSP/TSP are more likely than non-participants to persist at UCLA.

Finally, the last section of the *FSP/TSP Final Questionnaire* asked students about their fall quarter lecture and discussion section attendance. When asked how often they attended lecture sections, 72% indicated that they attended lecture sections 100% or almost 100% of the time, 25% indicated that they attended lecture sections approximately 75% of the time, and only 3% indicated that they attended lecture sections approximately 50% of the time or less. A similar pattern was found for all ethnic groups and for males and females. But, when fall lecture attendance was

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[2]Office of the Chancellor. (1989). Persistence Packet. Los Angeles: University of California, Los Angeles, Office of Information Management and Institutional Research.

broken down by cumulative grade point average, a statistically significant difference was found at the $p<.01$ level. Of those students who attended approximately 100% of the lecture sections, 2% maintained an "A" average, 45% maintained a "B" average, 46% maintained a "C" average, and only 7% maintained a "D" average. Of those students who attended lecture sections approximately 75% of the time, 1% maintained an "A" average, 29% a "B" average, 57% a "C" average, and 13% a "D" average. And, of those students who attended lecture sections 50% of the time or less, no students maintained either an "A" or "B" average, 66% maintained a "C" average, and 33% maintained a "D" average. Clearly, a positive relationship exists between attending lecture sections and maintaining a high grade point average.

Students were also asked how often they attended their fall quarter quiz/discussion section. Of those students who did have quiz/discussion sections, 68% indicated that they attended the sections 100% or almost 100% of the time, 23% indicated that they attended quiz/discussion sections approximately 75% of the time, and 6% indicated that they attended the sections 50% of the time or less. Again, a similar pattern was found for all ethnic groups and for males and females. When fall quiz/discussion section attendance was broken down by cumulative GPA, no statistically significant relationship was found. However, a pattern did emerge where those students who attended discussion sections on a more frequent basis tended to maintain a higher grade point average, than those who did not attend the discussion

sections on a frequent basis. Clearly, UCLA counselors and advisors in general, and FSP/TSP in specific should stress and reinforce the importance students attending lecture and quiz/discussion sections.

1.5 CONCLUSIONS

The results of this study clearly suggest that summer bridge programs for underrepresented and low-income students can help facilitate their transition and adjustment to university or college life and improve their persistence rates. FSP/TSP has proven that a strong curricular component can help teach students how to participate and succeed in an academic environment. In addition, these findings have also shown that summer bridge programs like FSP/TSP can help underrepresented and low-income students adjust and adapt to university life and can help them become a member of the campus community.

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Tables and Figures

TABLE 1.

Fulfillment of Academic and Non-Academic Goals and Objectives
Freshman Summer Program and Transfer Summer Program 1988 Cohort

Statement	Disagree*	Neutral	Agree**
I was able to keep up in most of my classes.	11.7%	20.5% (N=264)	67.8%
On average, my fall classes were more difficult than I expected them to be.	23.5	24.0 (N=265)	52.6
Academically, I found it more difficult during fall quarter than during FSP/TSP.	14.5	17.1 (N=263)	68.5
I consider myself a member of the UCLA community.	3.0	17.8 (N=264)	79.2
My goal is to graduate from UCLA.	0.8	4.2 (N=264)	95.1

*Disagree - created by collapsing the categories "Disagree" and "Strongly Disagree."

**Agree - created by collapsing the categories "Agree" and "Strongly Agree."

TABLE 2.

Utilization of AAP Services
Freshman Summer Program and Transfer Summer Program 1988 Cohort

AAP Services	Not at All	1-5 Hours a Week	6+ Hours a Week
AAP TUTORIAL SERVICES			
(N=262)	20.8%	46.4%	32.8%
AAP COUNSELING SERVICES			
(N=263)	41.5	49.2	9.3

*6+ Hours a Week - Created by collapsing the following categories: 6-10; 11-15; 16-20, and 20 or more.

TABLE 3.

Satisfaction with AAP Services
Freshman Summer Program and Transfer Summer Program 1988 Cohort

AAP Services	Dissatisfied*	Neutral	Satisfied**
AAP TUTORIAL SERVICES			
Quality (N=227)	8%	15%	77%
Availability (N=228)	7	13	80
AAP COUNSELING SERVICES			
Quality (N=222)	16	20	64
Availability (N=222)	14	21	65

*Dissatisfied - created by collapsing the categories "Dissatisfied" and "Very Dissatisfied."

**Satisfied - created by collapsing the categories "Satisfied" and "Very Satisfied."

Figure 1.
Fulfillment of Academic and Non-Academic Goals and Objectives by Ethnicity
Freshman Summer and Transfer Summer Program 1988 Cohort

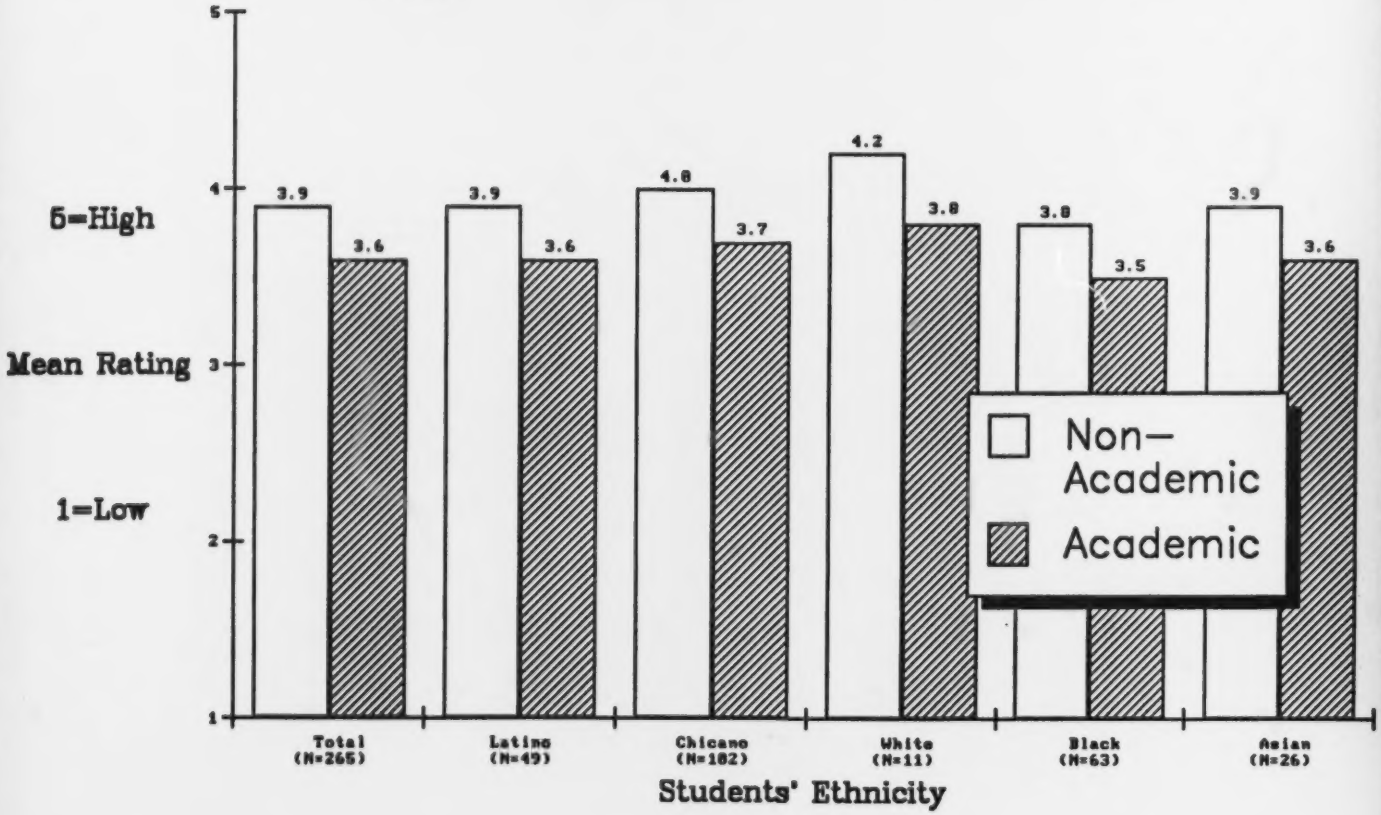

Figure 2.
Preparation Scales by Ethnicity
Freshman Summer and Transfer Summer Program 1988
Cohort

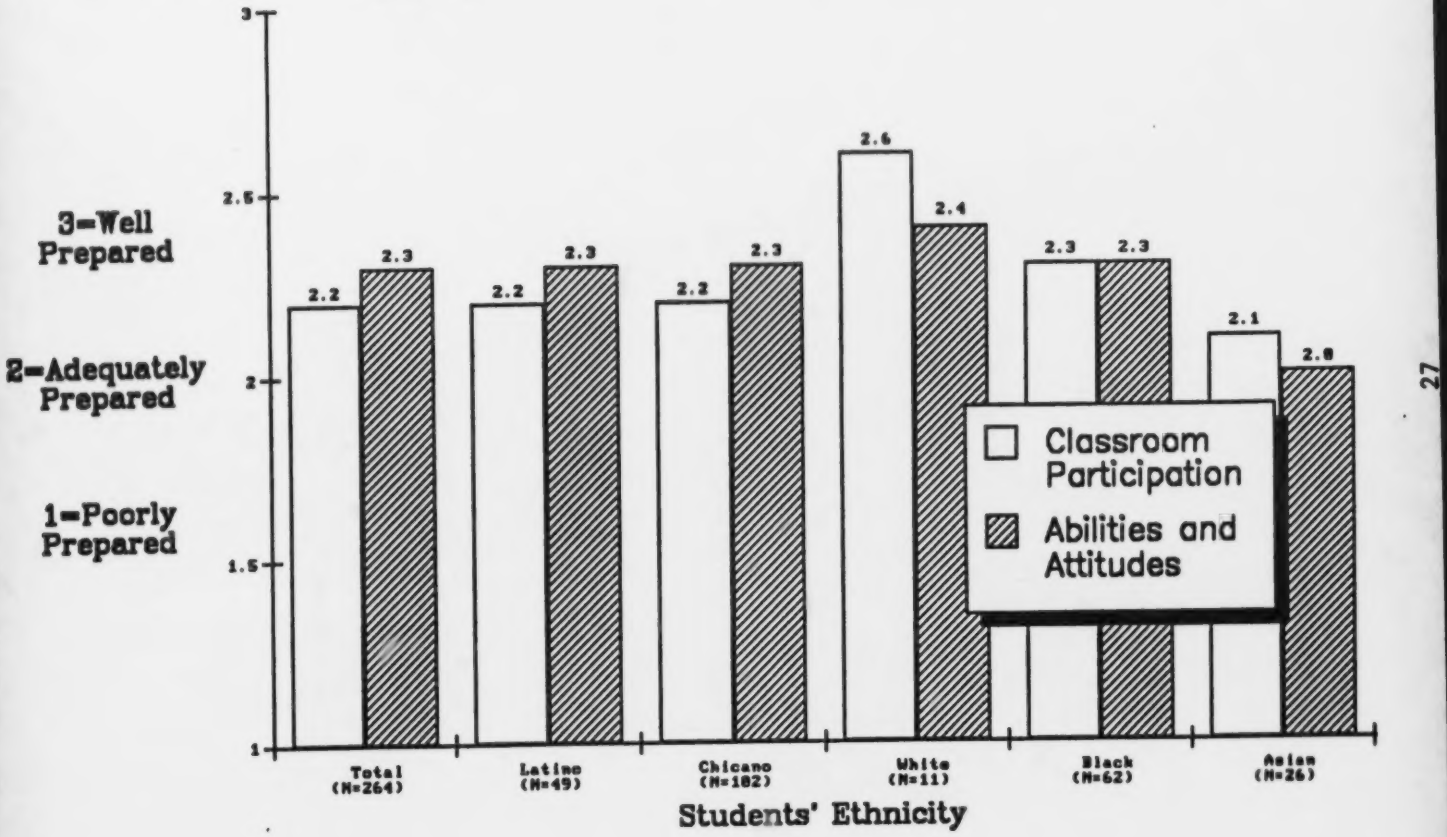

Figure 3.
Grade Point Averages
Freshman Summer and Transfer Summer Program 1988 Cohort

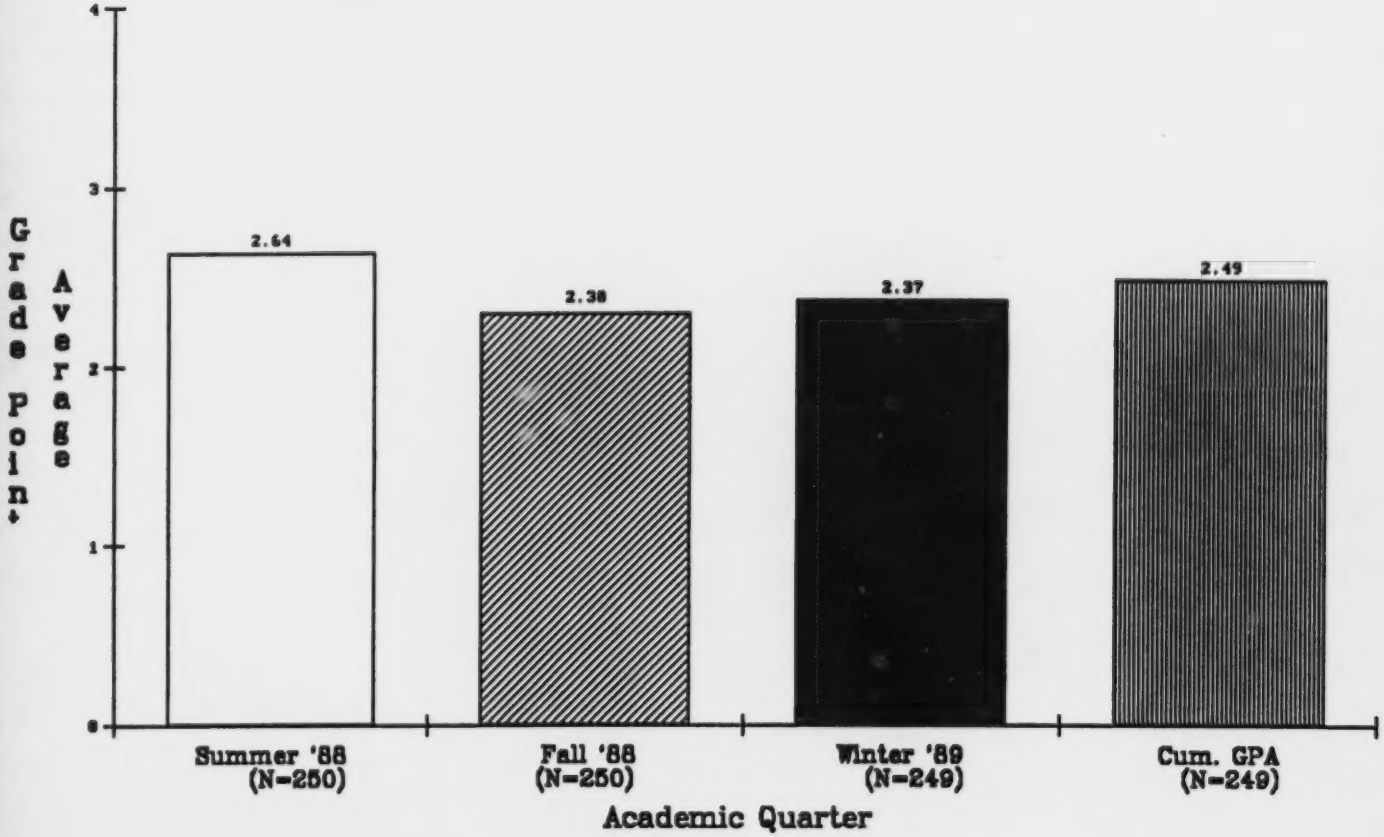

Figure 4.
Grade Point Averages by Ethnicity
Freshman Summer and Transfer Summer Program 1988 Cohort

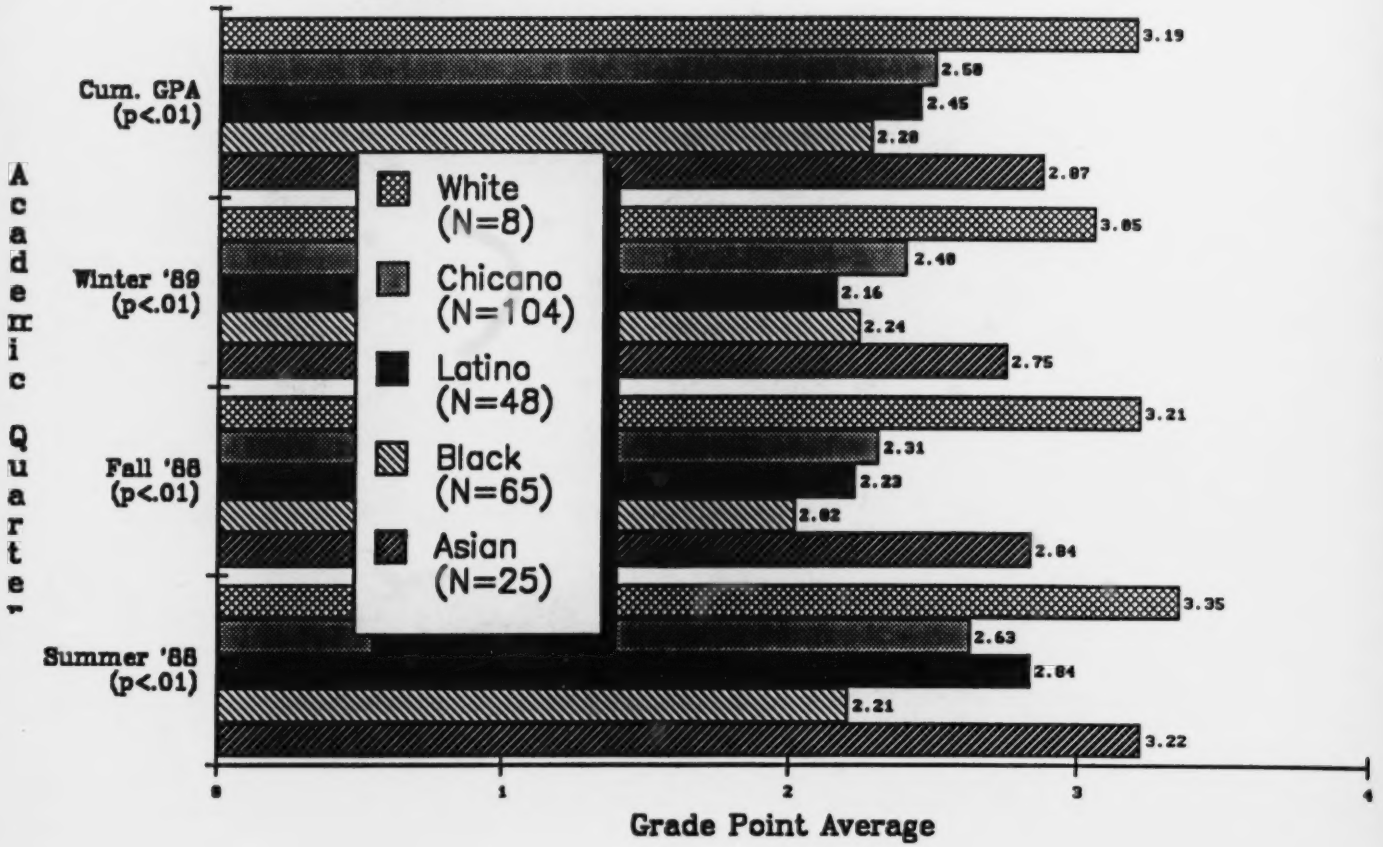

Figure 5.
Grade Point Averages by Gender
Freshman Summer and Transfer Summer Program 1988 Cohort